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## ABSTRACT

Most research in the area of early identification of learning problems has been devoted to determining the predictive validity of various assessment measures. Results indicate that the predictive validity of these measures is far from perfect and varies considerably from study to study. The transition room program provides what appears to be a promising treatment approach to early learning problems -- placement in a special class with an advantageous teacher-pupil ratio where a teacher can attempt to help the child in the areas where the child needs help and to provide a smooth transition to the first grade. A longitudinal study was conducted to evaluate transition room classes in two districts. Results of the study in District A suggested that while transition room students tended to achieve less well on the Iowa Test of Basic Skills than their peers, the achievement gap was closed by the end of sixth grade. In District B, an expected achievement score computed on the basis of early intelligence and readiness data was compared to actual achievement in fourth and sixth grades. The results, while somewhat encouraging, were not conclusive. In a second study, transition room students were matched with students of the same sex who performed at the same level on early measures of intelligence and readiness. Results showed that the control students outperformed the transition room students on later tests of achievement. A model for further evaluation of the transition room program is presented.

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EARLY INTERVENTION PROGRAMS: PROCEED WITH CAUTION AND EVALUATE

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Early identification of children with learning problems has been a perennial topic of interest among concerned educators and parents for many years. The reasons for concern appear logical and very justifiable. The arguments for such concern typically center around the old adage that "an ounce of prevention is worth a pound of cure." Thus, if we can effectively predict, at an early age, children with a high probability of experiencing failure in school, we can take action to prevent such failure. Such reasoning can be supported on the basis of many research studies which have demonstrated the importance of early environment and experience on later learning. Physical health is also often supported by early detection of disease followed by appropriate and timely treatment. As a number of authors have suggested (e.g. Keogh & Becker, 1973; Magliocca, Renaldi, Crew, & Kunzelman, 1977) early identification of learning problems implies that three things can happen: 1) predictive measures can be accurate, 2) predictive measures can suggest appropriate treatment and 3) the benefits of treatment (intervention, remediation of whatever type) outweigh the potential risks of treatment. Most research in this area unfortunately, has been devoted to the first question. The literature contains literally hundreds of studies which have investigated the predictive validity of different assessment devices including readiness tests, intelligence tests, perceptual motor tests, behavior rating scales, teacher nominations and socio-economic status indices. Not surprisingly, results of these studies indicate that our ability to predict is far from perfect, varies considerably from study to study, and implies that predictive validity of early measures must be answered on a local basis (Wilson and Hewett, 1977).

Such studies, as well as our collective experiences in the field of

learning disabilities, have also indicated that children with learning problems do not fit any of the old or new stereotypes (Bryan, 1974) that we have conjured up for them; that in fact, the population of children with learning problems is very heterogeneous rather than homogeneous even within that category of children we call "learning disabled." While a certain amount of this heterogeneity may be a result of our continuing problems in adequately defining "learning disabilities," the fact remains that children with learning problems at any age exhibit a great variety of strengths as well as deficits. Thus, while much of the literature has centered around the predictive relationships between early measures and later achievement or non-achievement in a statistical sense, we have much less information and research on the degree to which predictive measures, especially those administered early, suggest appropriate action to be taken. Practically speaking, what appears to have happened too often, is that we identify a group of children as high-risk at an early age and then either do nothing (which may not always be the worst course of action) or we inform a teacher that the child is high risk and something should be done about it. The teacher may or may not be given further direction or assistance and the teacher and school may or may not have the ability, skills and resources to follow up on any directions given.

In our area, several schools have transition room programs designed to serve children who have completed kindergarten but who appear not to be ready for the demands of first grade. In most schools, there are only two courses of action that can be taken. On the one hand, the child could suffer the dubious distinction of repeating a year in kindergarten which allows the child to develop and mature another year before beginning first grade. On

the other hand, the child could be placed in first grade and allowed to sink or swim in the murky waters of beginning reading, writing and arithmetic. The transition room program provides what appears to be a very constructive alternative to the previous two courses of action--placement in a special class with an advantageous teacher-pupil ratio where a teacher can attempt to help the child in the areas the child needs help and provide a smooth "transition" to the first grade. These transition room programs have been in effect for a number of years. During the past three years, the authors have responded to a request by these schools for an evaluation of the effectiveness of these programs.

Like many programs that were begun a few years back, the effectiveness of the programs may have appeared assured at least on logical grounds to say nothing of the studious advice of experts (e.g. Jansky and de Hirsch, 1972). Therefore there does not appear to have been a plan for ongoing, systematic formative or summative evaluation of the program. (Formative evaluation is designed to provide information for potential and continuous modification of a program; summative provides information to decide whether a program should continue to operate). Evaluation, of course, gets at the second and third aspects of the identification process named above, i.e. are treatments appropriate, and, do benefits outweigh the risks.

In our first study, we performed a longitudinal study of transition room children in two districts. Results of the study in District A (presented in Table 1) suggested that while transition room students tended to achieve on the Iowa Tests of Basic Skills (ITBS) less well than their peers, the transition students did seem to close some of the achievement gap by the end of sixth grade. In District B, the information available allowed us

| TRANSITION ROOM STUDENTS |                      |            | LOCAL SCHOOL POPULATION |            |
|--------------------------|----------------------|------------|-------------------------|------------|
|                          | Grade<br>Equivalents | Percentile | Grade<br>Equivalent     | Percentile |
| ITBS3                    | 2.51                 | 42         | 3.24                    | 69         |
| ITBS4                    | 3.62                 | 49         | 4.08                    | 70         |
| ITBS5                    | 4.89                 | 57         | 5.56                    | 73         |
| ITBS6                    | 5.78                 | 58         | 6.62                    | 75         |

TABLE 1. Grade Equivalent and Percentile ITBS scores at successive grade levels for Transition Room Students and their peers of District A.

| PREDICTED             |      |      | ACTUAL |      |                    |
|-----------------------|------|------|--------|------|--------------------|
|                       | Mean | S.D. | Mean   | S.D. | t                  |
| ITBS4                 | 3.51 | .78  | 3.54   | 1.30 | .11                |
| ITBS6                 | 5.12 | 1.03 | 5.54   | 1.34 | 2.27 <sup>xx</sup> |
| <sup>xx</sup> p < .05 |      |      |        |      |                    |

TABLE 2. Predicted and Actual Mean Grade Equivalent ITBS scores for Transition Room Students of District B.

to compute an expected achievement score on the basis of early intelligence and readiness data which we then compared to actual achievement in fourth and sixth grade. These results were somewhat encouraging although far from conclusive. For example, it is difficult to know whether the positive effects are due to the transition room or to good teaching that occurred later.

In a second study, we attempted to get a better basis for comparison by matching transition room students with students who were the same sex and who performed at the same level on early measures of intelligence and readiness. The results obtained were not encouraging since the students who did not have the transition room experience outperformed the transition room students on later tests of achievement. These results can not be seen as providing conclusive evidence either since the matching process eliminated many transition room students (appropriate matches could not be found for all students) and there seemed to be evidence that the basis for placement in the transition room was often not cognitive or intellectual in nature (which was the basis for matching) but based upon social, emotional, or behavioral concerns.

Barbara Keogh at UCLA, who has been working in the area of early identification for quite some time, has reported evidence that would support our last conclusion (Hall and Keogh, 1978). Her research suggest a variety of qualitative as well as quantitative differences between risk and non-risk children and she has attempted to identify sub-groups among the risk population.

The results of her studies as well as our own experience again underscores the fact of heterogeneity among children who have learning problems

or who are seen "at-risk."

Since existing information has not yielded conclusive results, we have developed an evaluation plan which we hope to use in the future to get better data for making judgments about the program. We have modified an evaluation model provided by Ten Brink (1974) to guide our future efforts. The model is provided in Table 3. The first step is to identify the kinds of judgments and decisions that need to be made. In the case of identification and later follow-through, there are a number of judgments and decisions that need to be made at various times. Each of these requires information in order to assure that the judgments and decisions have a sound base. The first step in an evaluation plan is to identify the decisions and judgments that need to be made and then decide the kinds of information required to make them. Then, the action step can be taken, i.e. actually making decisions which lead to action.

Table 4 provides a partial outline of our evaluation plan for an early identification and intervention program. At each stage of the program, certain important questions need to be asked, the information base should be broad and include all important sources of information. Some information needs to come from standardized tests, other information can be best obtained through survey instruments and other informal methods. We are currently applying this model to several transition room programs.

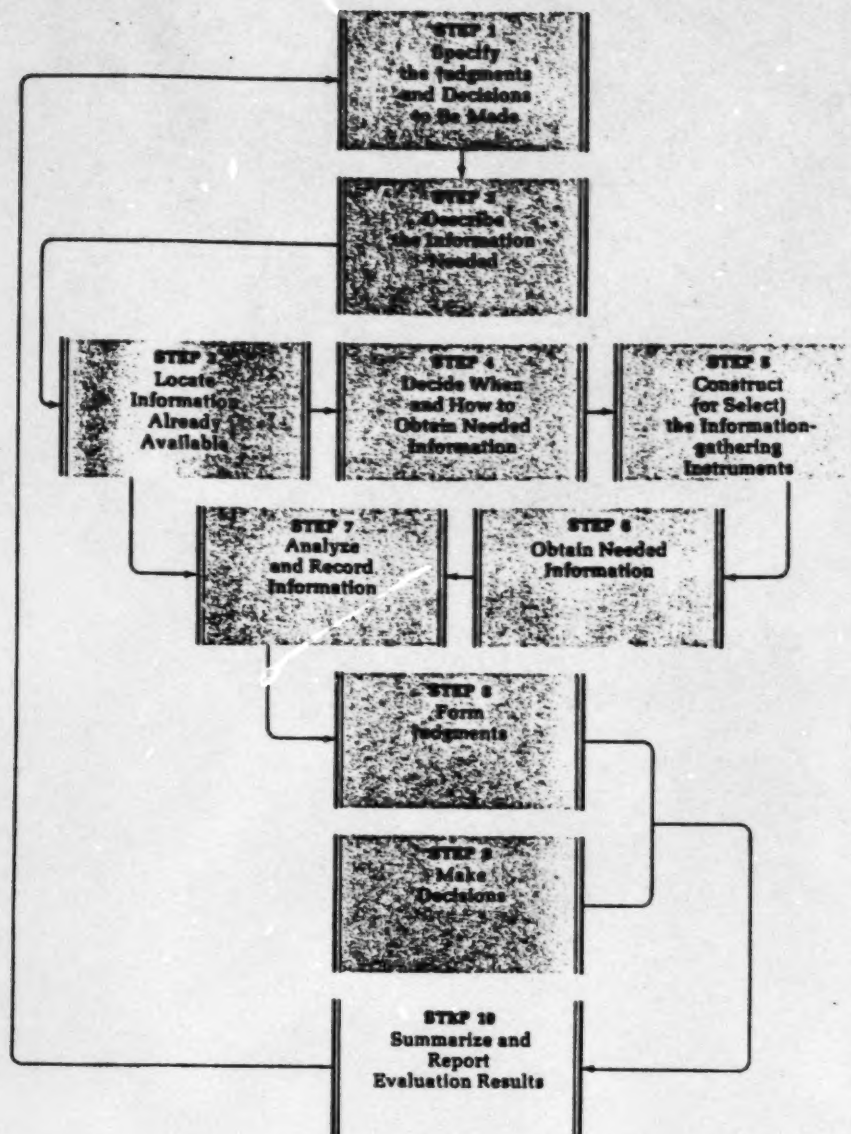


Table 3. TenBrink's Evaluation Model

|              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
|--------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| PRE-PROGRAM  | <p>DECISIONS: WHICH CHILDREN HAVE A HIGH PROBABILITY OF EXPERIENCING FAILURE IN SCHOOL? *</p> <p>INFORMATION: TEACHER AND/OR PARENT RATINGS (E.G. PUPIL RATING SCALE BY MYKLEBUST)<br/>         READINESS MEASURES: (E.G. METROPOLITAN READINESS TEST)*<br/>         PARENTAL ADVISEMENT AND CONSENT<br/>         (AS NEEDED) SPECIALIZED DIAGNOSTIC ASSESSMENT</p> <p>ACTION: IDENTIFY HIGH-RISK LEARNERS, IDENTIFY AVAILABLE RESOURCES TO SERVE CHILD</p>                                          |
| PROGRAM      | <p>DECISIONS: WHAT KIND OF EXPERIENCES DOES THE CHILD NEED TO INCREASE CHANCES FOR SUCCESS?</p> <p>INFORMATION: CLEARLY STATED OBJECTIVES FOR EACH CHILD (SIMILAR TO IEP)<br/>         TEACHER RATINGS<br/>         READINESS MEASURES</p> <p>ACTION: PROVIDE TAILORED EXPERIENCES ACCORDING TO AVAILABLE RESOURCES<br/>         ASSESS ATTAINMENT OF OBJECTIVES</p>                                                                                                                                 |
| POST-PROGRAM | <p>DECISIONS: HAS THE PROGRAM BEEN SUCCESSFUL FOR THE CHILD? DOES CHILD NEED CONTINUING SUPPORTIVE SERVICES? HAVE THERE BEEN UNANTICIPATED SIDE-EFFECTS?</p> <p>INFORMATION: ASSESSMENT OF PROGRAM OBJECTIVES<br/>         SCHOOL ACHIEVEMENT DATA (STANDARDIZED OR TEACHER GENERATED)<br/>         TEACHER RATINGS<br/>         PARENTAL OBSERVATIONS (SURVEY INSTRUMENT)</p> <p>ACTION: ASSESS PROGRAM AND NEED FOR ADDITIONAL RESOURCES<br/>         PROVIDE CONTINUING SERVICES WHERE NEEDED</p> |
| 10           | <p>TABLE 4 EVALUATION MODEL FOR EARLY INTERVENTION PROGRAM</p> <p>* DECISION QUESTIONS AND INFORMATION SOURCES ARE ILLUSTRATIVE RATHER THAN EXHAUSTIVE</p>                                                                                                                                                                                                                                                                                                                                           |

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